Claims

[c1] 1. A method for manufacturing a disk-shaped or annular stator component or rotor component (1) with a plurality of blades (13) arranged one after another in a path extending around said component for guiding a gas flow, said method comprising:
spark-eroding, simultaneously, at least a portion (11) of each of a plurality of channels (12) in a first set of channels out of a disk-shaped or annular workpiece (2) that is configured for forming the component (1), said channels (12) being configured to delimit said blades (13) in a circumferential direction of the workpiece (2).

[c2] 2. The method as recited in claim 1, further comprising:
rotating the disk-shaped or annular workpiece (2), after spark erosion of said portion (11) of the first set of channels (12), through a distance in a circumferential direction; and
spark-eroding at least a portion of each of a plurality of channels (12) establishing a second set of channels.

[c3] 3. The method as recited in claim 1, further comprising:
turning the workpiece (2) after all the channels have been spark-eroded from a first side thereof; and

spark-eroding the remaining portion of the channels (12) in the same way as the second side of the workpiece.

[c4] 4. The method as recited in claim 1, further comprising: manipulating an electrode (6) configured for spark erosion to simultaneously perform translatory movement and rotary movement during a course of trajectory by the electrode (6) through the workpiece (2).

[c5] 5. The method as recited in claim 1, further comprising: spark-eroding, simultaneously, two opposite surfaces of each of the channels (12) in the circumferential direction of the workpiece (2).

[c6] 6. The method as recited in claim 5, further comprising: spark-eroding opposite surfaces of each of the channels (12) utilizing the same spark-erosion electrode (6).

[c7] 7. The method as recited in claim 1, further comprising: spark-eroding said channels (12) at a spacing from the edge (14) of the workpiece in the radial direction so that a cover (15) is formed outside the blades in the radial direction.

[c8] 8. The method as recited in claim 7, further comprising: spark-eroding said channels (12) so that the cover (15) is formed in substantial contact with the blades.

[c9] 9. The method as recited in claim 1, further comprising: spark-eroding said channels (12) so that a cover (15) is formed in substantial contact with the blades.

[c10] 10. The method as recited in claim 1, further comprising: machining a plurality of spark-erosion electrodes (6) having a mutual spacing along a curved path in a first operation from at least one basic element (3, 5) arranged on a spark eroding means (4) configured for performing the spark erosion; and
utilizing said spark-erosion electrodes (6), spark eroding the channels (12) from the workpiece (2).

[c11] 11. The method as recited in claim 10, wherein an attachment portion (7) of the spark-eroding means (4) has a shape enabling use as a machine tool for manufacturing the spark-erosion electrodes (6) and use in a spark-erosion machine for manufacturing the channels (12) by spark erosion.

[c12] 12. The method as recited in claim 11, wherein a plurality of the basic elements (3, 5) are arranged on the spark-erosion means (4) in a curved path before machining, and in that at least one of said spark-erosion electrodes is machined from each of them in the first operation.

[c13] 13. The method as recited in claim 11, wherein said machining comprises milling.

[c14] 14. A device for manufacturing a disk-shaped or annular-shaped stator or rotor component (1) having a plurality of blades (13) arranged one after another in a path extending around said component (1) for guiding a gas flow, the device comprising:
a spark-erosion means (4) configured to be connected to a voltage and to be brought into contact with a workpiece (2) for removal of material from the workpiece (2) thereby forming one of said blades;
said spark-erosion means (4) further comprising a plurality of spark-erosion electrodes (6) for said contact with the workpiece and which are arranged at a mutual spacing from one another in a curved path so that at least a portion (11) of each of a plurality of channels (12) in a first set of channels can be spark-eroded simultaneously out of the workpiece (2), which is disk-shaped or annular for forming the component (1), which channels (12) are configured to delimit said blades (13) in the circumferential direction of the workpiece.

[c15] 15. The device as recited in claim 14, wherein the spark-erosion electrodes (6) are arranged one after another in a path which is at least partly circular.

[c16] 16. The device as recited in claim 15, wherein the spark-erosion means (4) comprises a disk and a plurality of basic elements (3) secured on the disk, and each of the basic elements comprises a plurality of said spark-erosion electrodes (6).